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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,916	03/11/2004	Charles E. Taylor	SHPR-01360USO	6826

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BELL, BOYD & LLOYD LLP  
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CHICAGO, IL 60690

EXAMINER
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SNIDER, THERESA T

ART UNIT	PAPER NUMBER
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1744

MAIL DATE	DELIVERY MODE
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07/12/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/799,916	<b>Applicant(s)</b> TAYLOR ET AL.	
	<b>Examiner</b> Theresa T. Snider	<b>Art Unit</b> 1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 10-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 20-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/14/2004, 3/25/2005</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to because in figure 1 the application information covers up the 'Fi' of 'figure'. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The disclosure is objected to because of the following informalities:

Exemplary of such:

0001, the missing application number should be provided.

0003, 'a' should be inserted after 'are'.

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0011, 'to faces' should be replaced with 'faces'.

0016, it is unclear as to what is meant by 'can be use the position'.

0017, 'sence' should be replaced with 'sense'.

0019, it is unclear as to what is meant by 'When the robot cleaner reaches a wall of the room.'.

0020, 'once a contact' should be replaced with 'once contact'.

Appropriate correction is required.

### ***Claim Objections***

3. Claims 1-10 are objected to because of the following informalities:

Exemplary of such:

Claim 1, line 2, 'unit,' should be replaced with 'unit'.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-10 and 24-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Exemplary of such:

Claim 1, line 4, 'the room' should be replaced with 'a room';

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Lines 4-5, 'the power cord' lacks proper antecedent basis.

Claim 5, 'the central unit' lack proper antecedent basis.

Claim 6, line 2, 'the floor' lacks proper antecedent basis.

Claims 6-10, line 1, 'cleaner' should be replaced with 'system'.

Claims 4-28, line 1, 'cleaner' should be replaced with 'system'.

Claim 24, line 2, 'the floor' lacks proper antecedent basis.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

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evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1, 4 and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP5-46246 in view of Reindle et al.(6,725,986).

JP5-46246 disclose a similar robot system however fail to disclose the electrical cord wound in as the robot cleaner gets closer to the unit.

JP5-46246 discloses a robot cleaner including a cleaning unit and a motion unit (figs. 1-2, #7,6 and fig. 3, #3,4).

JP5-46246 discloses a unit connected to the robot cleaner by an electrical cord (0024, line 7-8).

JP4-46246 discloses winding the cord in (0010). Reindle et al. discloses a robot cleaner having an electrical cord is wound when the cleaner gets closer to a unit (col. 4, lines 53-54 and col. 4, line 66-col. 5, line 5). It would have been obvious to one of ordinary skill in the art to provide the winding in of the electrical cord as it gets closer to the unit(slack in tension) of Reindle et al. in JP4-46246 to ensure that the cleaner does not become entangled in the cord.

With respect to claim 4, JP5-46246 discloses the robot cleaner includes a payout (fig. 2, #21). Reindle et al. discloses a payout (fig. 1).

With respect to claim 6, JP5-46246 discloses the cleaner prevents the electrical cord from completely wrapping around an object on the floor (0018).

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With respect to claims 7-8, JP5-46246 discloses keeping track of its motion and cleaning back and forth in a region around an object (0018-0019).

With respect to claim 9, JP5-46246 discloses the robot cleaner including a processor (fig. 2, #16).

With respect to claim 10, JP5-46246 discloses the processor controls the motion unit (0008).

10. Claims 2-3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP5-46246 in view of Reindle et al.(6,725,986) as applied to claim 1 above, and further in view of Hill(4,282,954).

JP5-46246 in view of Reindle et al. discloses a similar robot system however fails to disclose the unit being a central unit.

Hill discloses the use of a central unit for connection to an appliance and an electrical cord (fig. 1, #12,14,17,18). It would have been obvious to one of ordinary skill in the art to provide the central unit of Hill in JP5-46246 in view of Reindle et al. to allow for use of the cleaner an appreciable distance from an outlet source of electrical power.

With respect to claim 3, Hill discloses the unit connected to a power socket by another power cord (fig. 1, #14,16).

With respect to claim 5, Hill discloses the central unit includes a payout (abstract).

11. Claims 20-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP5-46246 in view of Hill(4,282,954).

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JP5-46246 discloses a similar robot system however fails to disclose however fails to disclose the unit connected to a power socket by a power cord.

JP5-46246 disclose a similar robot system however fail to disclose the electrical cord wound in as the robot cleaner gets closer to the unit.

JP5-46246 discloses a robot cleaner including a cleaning unit and a motion unit (figs. 1-2, #7,6 and fig. 3, #3,4).

JP5-46246 discloses a unit connected to the robot cleaner by a power cord (0024, line 7-8). Hill discloses the use of a unit for connection to an appliance and a power cord (fig. 1, #12,14,17,18). It would have been obvious to one of ordinary skill in the art to provide the unit of Hill in JP5-46246 to allow for use of the cleaner an appreciable distance from an outlet source of electrical power.

With respect to claim 21, JP5-46246 discloses the robot cleaner includes a payout (fig. 2, #21).

With respect to claim 22, Hill discloses the central unit includes a payout (abstract).

With respect to claim 23, JP5-46246 discloses the circling of the cleaner for cleaning a room (0007). It would have been obvious to one of ordinary skill in the art to determine the most appropriate motion of the cleaner in JP5-46246 in view of Hill to allow for the most effective cleaning of a room.

With respect to claim 24, JP5-46246 discloses the cleaner prevents the electrical cord from completely wrapping around an object on the floor (0018).

With respect to claims 25-26, JP5-46246 discloses keeping track of its motion and cleaning back and forth in a region around an object (0018-0019).



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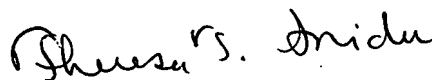
With respect to claim 27, JP5-46246 discloses the robot cleaner including a processor (fig. 2, #16).

With respect to claim 28, JP5-46246 discloses the processor controls the motion unit (0008).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Theresa T. Snider whose telephone number is (571) 272-1277. The examiner can normally be reached on Monday-Friday (5:30am-2:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on (571) 272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Theresa T. Snider  
Primary Examiner  
Art Unit 1744

7/2/07